IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Koenig *et al.*

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For: FcγRIIB-SPECIFIC ANTIBODIES AND METHODS OF USE THEREOF

Attorney Docket No.: 11183-003-999

DECLARATION OF DR. SCOTT KOENIG UNDER 37 C.F.R. §1.132

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, SCOTT KOENIG, M.D., Ph.D. declare as follows:

1. I received my Bachelor of Arts degree in Biology from the Cornell University, Ithaca, New York in 1973. I received my PhD in Biology (Immunology) from Cornell University Graduate School of Medical Sciences, New York, New York in 1979 and my doctorate in Medicine from the University of Texas Health Science Center at Houston, Houston, Texas in 1981. From 1981 to 1984, I completed my internship and residency in Medicine at the Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania.

2. From 1984 to 1990, I was employed at the National Institutes of Health, National Institute of Allergy and Infectious Diseases, Laboratory of Immunoregulation in Bethesda, Maryland first as a medical staff fellow and then as a senior staff fellow. From 1990 to 2001, I was employed at MedImmune, Inc., Gaithersburg, Maryland, holding the positions of Director of Immunology; Director of Research; Vice President, Research; and finally Senior Vice President, Research. Since 2001 I have been and am currently employed as the President and Chief Executive Officer of MacroGenics, Inc., Rockville, Maryland. Since 2003, I have served and am presently serving as a member of the Board of Scientific Counselors, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland and as Chairman, Board of Directors, Applied Genetic Technologies Corp., Alachua, Fl. Since 2005, I have also been a member of the Cornell University Council, Ithaca, New York. I have published various articles in peer-reviewed journals. A copy of my Biographical Sketch is attached hereto as **Exhibit 1**.

EXHIBIT C

3. I have reviewed the specification of the present application. I have also reviewed the Office Action dated April 10, 2006, which is attached hereto as **Exhibit 2,** and the pending claims as amended, which are attached hereto as **Exhibit 3**. I have also reviewed Budde *et al.*, "Specificity of CD32 mAb for FcγRIIa, FcγRIIb1, and FcγRIIb2 Expressed in Transfected Mouse B Cells and BHK-21 Cells, " in Leukocyte Typing V, White Cell Differentiation Antigens, Vol. I, (eds. Schlossman et al.), 828-832 (1995) ("Budde"), attached hereto as **Exhibit 4**.

4. Budde reports that the mAb KB61 shows greater reactivity with IIA1.6 cells that recombinantly express FcγRIIb1 or FcγRIIb2 than with IIA1.6 cells that recombinantly express FcγRIIaLR orFcγRIIaHR (see Table 1, page 829). However, Budde also shows that the reactivity of KB61 is equivalent in BHK-21 cells recombinantly expressing FcγRIIa or FcγRIIb isoforms and is equivalent in control cells that express FcγRIIa or FcγRIIb, *i.e.*, K-526 or Daudi cells, respectively.

5. I, or investigators under my supervision, have conducted independent research to assess the binding specificity of KB61 to FcγRIIA and/or FcγRIIB. The results of our studies, shown in FIG. A and FIG. B (attached hereto as **Exhibit 5**), demonstrate that antibody KB61 exhibits similar binding to FcγRIIB and FcγRIIA within statistical error.

6. FIG. A and FIG. B (**Exhibit 5**) present sensograms of the real time binding of FcγRIIB and FcγRIIA, respectively, to Ab KB61. KB61 was obtained from Accurate Chemical (Westbury, NY). The binding of monoclonal antibodies to soluble FcγRIIA (R131) or FcγRIIB extracellular domains expressed in 293H cells was analyzed by surface plasmon resonance using a BIAcore 3000 biosensor (Biacore AB, Uppsala, Sweden). Immobilization of the capturing $F(ab')_2$ fragment of GAM Fc-specific antibodies (Jackson Immunoresearch, West Grove, PA) on the CM-5 sensor chip was performed according to the procedure recommended by the manufacturer. Each monoclonal antibody and mouse IgG1, IgG2a and IgG2b isotype controls was captured on the CM-5 chip surface with the immobilized fragment, $F(ab')_2$, of GAM Fc-specific antibodies by injection of a solution containing 300nM of antibody over the surface at a flow rate of 5 ml/min for 240 sec. Capturing of antibody was followed by injection of soluble receptor at a concentration of 220 nM at a flow rate of 20 ml/min for 120 sec. Regeneration of the $F(ab')_2$ GAM surface was performed by pulse injection of 100 nM glycine, pH 1.5. Reference curves were obtained by injection of each soluble receptor over the immobilized $F(ab')_2$ of GAM without captured antibody. Responses resulted from subtraction of reference curves that were normalized to

the same level of captured antibody. Experimental data were analyzed using BIAevaluation 3.0 software©. Ab FL18.26 (RDI, Flanders, NJ) served as positive control for binding to either FcγRIIA^{131} or FcγRIIB; Ab IV.3 (ATCC No. HB-217) was negative control for binding to FcγRIIB and positive control for binding to FcγRIIA^{131}. mIgG2b (Jackson Immunoresearch, West Grove, PA) served as isotype control for Ab IV.3.

I hereby declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that I make those statements with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 9 Oct 2006 Scott Koenig

SCOTT KOENIG, M.D., PH.D.